

IN THE ABSTRACT

On page 175, lines 1-8, please delete the "Abstract of the Invention", and insert therein a new Abstract of the Invention as follows:

--ABSTRACT OF THE INVENTION

Some embodiments provide an LP method that identifies routes. In some embodiments, this method is used by a router that defines routes for nets within a region of a design layout. Each net has a set of pins in the region. The method partitions the region into a set of sub-regions. For each particular net, the method identifies a set of route. Each route for a net traverses the sub-regions that contain the net's pins. Each route includes a set of route edge, and each route edge connects two sub-regions. Also, some of the identified routes have route edges that are at least partially diagonal. The method formulates a linear-programming ("LP") problem based on the identified sets of routes for the nets. The method then solves the LP problem to identify one route for each net. In some embodiments, the formulated LP problem is an integer-linear-programming ("ILP") problem, and solving the ILP problem returns integer solutions that specify one route for each net. In other embodiments, solving the LP problem returns real-numbered solutions. In some of these embodiments, the method converts the real-number solutions into integer solutions that specify one route for each net.--